## Abstract of the Disclosure

The subject invention concerns gene sequences and the use thereof as markers for large granular lymphocyte (LGL) leukemia. The gene sequences of the invention are differentially expressed in LGL. Another aspect of the invention pertains to therapeutic compositions directed to gene expression and gene products of differentially expressed genes in LGL. The invention also concerns methods for screening and identifying compositions that may be of therapeutic benefit to patients having LGL leukemia and/or autoimmune disorders. In addition, because a large fraction of patients with T-LGL leukemia also have rheumatoid arthritis, these differentially expressed genes also represent novel targets for the diagnosis, prevention or treatment of rheumatoid arthritis and other autoimmune diseases.

5

10